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REMARKS

Claims 1-27 remain pending. Of these, claims 1-12 have been withdrawn from consideration by the Examiner.

In the Office Action, the Examiner made the prior restriction requirement final; rejected claims 13, 15, 18, and 21 under 35 U.S.C. § 101; rejected claims 15, 18, and 21 under 35 U.S.C. § 112, ¶2; and rejected claims 13-27 under 35 U.S.C. § 102(e) as being anticipated by Alverson et al. (US Patent No. 6,862,635).

§ 101 rejection:

Regarding the first basis for the § 101 rejection, Applicants note that "carrier wave" does not appear in claim 13. As instructed by M.P.E.P. § 2111.01(II), "It is improper to import claim limitations from the specification." This is exactly what the Examiner has done. Nonetheless, to avoid protracted argument, Applicants have amended claim 13 to recite a "tangible" medium, which should exclude the carrier wave that the Examiner has improperly imported.

Regarding the second bases for the § 101 rejection, the Examiner has not properly considered the claims as a whole, as required by the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, OG, 22 November 2005, Section II(C):

> Finally, when evaluating the scope of a claim, every limitation in the claim must be considered. USPTO personnel may not dissect a claimed invention into discrete elements and then evaluate the elements in isolation. Instead, the claim as a whole must be considered.

This is just what the Examiner has done on page 4 of the Office Action: dissected a single limitation from each of claims 13, 15, 18, and 21, and based a patentability conclusion on it without considering the other limitations. As such, Applicants need not further respond, because the Examiner has not considered every limitation in the claims.

To expedite prosecution, however, Applicants note the following. Claim 13, as a whole, is useful at least because of its recitations of "ensuring that a data element is not added to a data structure if that data element is already present in the data structure" and "preventing multiple threads from adding a common data element to the data structure." Claims 15 and 18 are useful at least by virtue of their dependence on claim 13. See M.P.E.P. § 2107.02:

> Generally speaking, however, a dependent claim will define an invention that has utility if the >independent< claim **>from which the dependent claim depends is drawn to the same statutory class of invention as the dependent claim and the independent claim defines< an invention having utility.

Similarly, claim 21 is useful at least because of its recitation of "preventing multiple concurrent threads from adding a same element to a data structure." The § 101 rejections of claims 13, 15, 18, and 21 are improper and should be withdrawn for at least these reasons.

§ 112, ¶2 rejection:

Claims 15 and 18 have been amended to emphasize the temporal nature of the limitations therein. Again, the Examiner should not look at limitations in a vacuum, disregarding other related limitations. Claim 15 as amended requires "permit[ting] a first one of the multiple threads in time to add the common data element to the data structure and prevent[ing] subsequent ones of the multiple threads from adding the common data element." Taken together (i.e., in the conjunctive), the permitting and preventing limitations of claim 15 are sufficiently clear and definite. Similarly, claim 18 as amended requires "permit[ting] only one of the multiple threads at a time to add its different data element to the common location in the data structure and prevent[ing] other ones of the multiple threads from adding their different data elements at the time. Read fairly and together, the permitting and preventing limitations of claim 18 also pass muster under 35 U.S.C. § 112, ¶2. The § 112, ¶2 rejection of claims 15 and 18 should be withdrawn for these reasons.

Regarding claim 21, the Examiner again focuses on only certain parts of the claim, while ignoring others. Fairly and completely read, the second limitation of claim 21 requires that there be multiple concurrent threads; that one of the concurrent threads added an element to the data structure; that another one of the concurrent threads seeks to modify the element that was added to the data structure by the first concurrent thread; and that the modification by the second concurrent thread is permitted. The sequential operations of two concurrent threads on the same data element in a data structure as set forth in claim 21 is claimed sufficiently clearly and precisely, even if the verb "to permit"[1] is used. The metes and bounds of claim 21 are sufficiently clear if the last 16 words of the claim are properly taken into account. The § 112, ¶2 rejection of claim 21 should be withdrawn for these reasons.

§ 102(e) rejection:

Applicants respectfully traverse the 35 U.S.C. § 102(e) rejection of claims 13-27.

Claims 13-20 require a medium including, *inter alia*, "ensuring that a data element is not added to a data structure if that data element is already present in the data structure; and . . . preventing multiple threads from adding a common data element to the data structure." Alverson et al. fails to disclose all limitations of claims 13-20.

Page 6 of the Office Action alleges that col. 12, lines 25-45, of Alverson et al. discloses the "ensuring . . ." limitation. This portion of Alverson et al., however, only discloses checking whether a word of memory is empty. A word of memory is, of course, merely a location, and thus does not reasonably correspond to the claimed "data element." The element of Alverson et al. that corresponds to the claimed "data element" is the "calculated value" on col. 12, line 42, and not the cited word of memory. The cited portion of Alverson et al. fails to disclose checking whether "that data element" to be added "is already present in the data structure" as required by claims 13-20.

Further, there is no disclosure in the cited portion of Alverson et al. of the "data structure" required by claims 13-20 either. The § 102(e) rejection of claims 13-20 is improper for at least these reasons.

Page 6 of the Office Action also alleges that col. 13, lines 15-33, of Alverson et al. discloses the "preventing . . ." limitation. This portion of Alverson et al., however, only discloses two schemes for adding items to a list generally – one serial and one parallel. The cited portion of Alverson et al. fails to disclose either "a common data element" or "preventing multiple threads from adding" such a common data element to the list as required by claims 13-20. The § 102(e) rejection of claims 13-20 is improper for at least these additional reasons, and it should be withdrawn.

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[1] The Examiner is respectfully requested to suggest any alternate language that would be looked upon more favorably.

Claims 21-27 require a method including, *inter alia*, "preventing multiple concurrent threads from adding a same element to a data structure." Alverson et al. fails to disclose all limitations of claims 21-27.

Page 6 of the Office Action alleges that col. 13, lines 15-33, of Alverson et al. discloses the "preventing . . ." limitation. As explained above, this portion of Alverson et al., however, only discloses two schemes for adding items to a list generally – one serial and one parallel. It does not disclose "a same element;" rather, the cited portion discloses list access techniques generally, and does not contemplate the special case of two threads adding the same element to a list. Hence, the cited portion of Alverson et al. fails to disclose either "a same element" or "preventing multiple threads from adding" such a same element to the list as required by claims 21-27. The § 102(e) rejection of claims 21-27 is improper for at least these reasons, and it should be withdrawn.

Reconsideration and allowance of all pending claims 13-27 are respectfully requested.

In the event that any outstanding matters remain in this application, Applicants request that the Examiner contact Alan Pedersen-Giles, attorney for Applicants, at the number below to discuss such matters.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0221 and please credit any excess fees to such deposit account.

Respectfully submitted,

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